

# CS130R: SELECTED PROGRAMMING LANGUAGES

## MATLAB

Lectures: M 4:00pm - 4:50pm, MSC W303

Labs: W 4:00pm - 4:50pm, MSC E308A

**Instructor:** Blair Rossetti  
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office: MSC N410  
website: <http://www.mathcs.emory.edu/~brosset>  
office hours: M 3:00pm - 4:00pm and T 1:00pm - 2:00pm

**Textbook:** Stormy Attaway. *Matlab: a practical introduction to programming and problem solving*. Butterworth-Heinemann, 2013

**Resources:** Course materials, announcements, and homework assignments will be posted on my website. It is your responsibility to check the website regularly.

**Office hours:** Weekly office hours are the best resource for help. If your schedule conflicts with the preassigned times, then let me know, and we can find a time to meet by appointment. To schedule an appointment, please send me an email at least 24 hours in advance.

**Description:** This course is designed for non-CS majors and provides an introduction to programming concepts in the context of the MATLAB programming language. MATLAB, short for MATrix LABoratory, is a high-level language used across a variety of scientific disciplines. An extensive library of functions and thorough documentation makes MATLAB well suited for data analysis and algorithm prototyping. Students are expected to have basic knowledge of computers and algebra. Advanced topics will be covered in class, or provided as background material.

**Course objectives:** Modern technology allows us to gather information on nearly every aspect of our lives, and, as a result, has lead to a tremendous influx of data. Computers and computer programs allow us to extract meaningful conclusions about our health, community, culture and environment that would be otherwise unattainable. In this course students will:

- identify the proper data types and control structures necessary to accomplish a given task
- identify syntax, logical and run-time errors
- communicate program objectives and architecture via proper documentation and coding etiquette
- communicate output to end-users via graphs, figures and statements
- design a computer program that solves a real-world problem

**Attendance:** You are expected to be in class each day prepared to learn. You are also expected to participate in class (ask questions, join class discussions, contribute to group work, etc.). If you do not attend class, then you are still responsible for the material covered. Make-up quizzes, homework or exams will not be given.

**Grading:** All grades will be posted on the course Blackboard site. The scale used for this course is a the traditional 10 point scale.

Assignment/Exam	Percent of Final Grade												
<i>Daily Quizzes</i> - A short quiz will be given at the beginning of each class. Your lowest two (2) quiz scores will not contribute to your final grade.	20%												
<i>Homework</i> - A set of exercise questions from the course textbook will be assigned biweekly. A subset of the assigned questions will be graded; however, you are expected to complete all homework questions.	25%												
<i>Midterm Exam</i> - A closed-book exam will be given in class on March 2.	25%												
<i>Final Project</i> - The final exam consists of a group project, report and presentation. The project topics and group assignments will be announced later in the semester. Group presentations will occur during the final exam period from 11:30am-2:00pm on April 28.	30%												
<table border="1"> <tbody> <tr> <td>A = 93 - 100%</td> <td>A- = 90 - &lt; 93%</td> <td>B+ = 87 - &lt; 90%</td> <td>B = 83 - &lt; 87%</td> <td>B- = 80 - &lt; 83%</td> <td>C+ = 77 - &lt; 80%</td> </tr> <tr> <td>C = 73 - &lt; 77%</td> <td>C- = 70 - &lt; 73%</td> <td>D+ = 67 - &lt; 70%</td> <td>D = 63 - &lt; 67%</td> <td>F = &lt; 67%</td> <td></td> </tr> </tbody> </table>		A = 93 - 100%	A- = 90 - < 93%	B+ = 87 - < 90%	B = 83 - < 87%	B- = 80 - < 83%	C+ = 77 - < 80%	C = 73 - < 77%	C- = 70 - < 73%	D+ = 67 - < 70%	D = 63 - < 67%	F = < 67%	
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C = 73 - < 77%	C- = 70 - < 73%	D+ = 67 - < 70%	D = 63 - < 67%	F = < 67%									

**Homework policy:** You are encouraged to work together on all homework, but *the work you submit must be your own*. In particular, copying answers from an outside source (ex. another student, solutions manual, tutor, internet, etc.) is forbidden. If you work with another person, then you are required to cite that person at the beginning of your work. Except for prior notification of extenuating circumstances, late homework will **NOT** be accepted. You should expect to spend about 3 hours outside of class for every hour spent in class.

**Quiz/Exam policy:** Quizzes and exams are intended to test your comprehension of the course material. As such, students must complete all quizzes and exams independently and without the use of reference material (ex. books, notes, internet, etc.). Make-up exams require prior written permission from a dean in the Office for Undergraduate Education.

**Accommodations:** Emory University seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in this class, please contact the Access, Disability Services, and Resources (ADSR) Office. If you are

eligible for accommodations, please provide me with your ADSR eligibility letter as soon as possible. Accommodations can only be provided after receiving your eligibility letter.

**Inclusion:** We respect people from all backgrounds and affirm people's decisions about gender expression and identity. Please feel free to correct me if your preferred name or gender pronoun are different from that listed on the class roster.

**Disruptions:** Please be respectful and mindful of your peers. Do not disrupt, distract or prevent others from learning by arriving late, leaving early or using computers and personal devices inappropriately. All personal devices that are not being used for class purposes must be turned off at the beginning of each class and exam.

**Academic integrity:** All students must adhere to the provisions of the Emory University Honor Code. For more information see:

<http://catalog.college.emory.edu/academic/policies-regulations/honor-code.html>

**Important dates:**

Tuesday, Jan. 19 - End of Add/Drop/Swap

Thursday, Jan. 28 - Last day to change grade status

Wednesday, Mar. 2 - Midterm exam

Friday, Mar. 4 - Last day to withdrawal without penalty

Friday, Apr. 1 - Last day for one-time partial withdrawal

Monday, Apr. 25 - Last day of class

Thursday, Apr. 28 - Final exam

Note: This syllabus is subject to change at my discretion.